

ABSTRACT OF THE DISCLOSURE

An apparatus for receiving and reflecting ions. The ion mirror of the present invention is integral to a mass spectrometer flight tube and includes a front electrode, middle electrode, and a rear electrode. Each of the three electrodes are designed for receiving and reflecting ions. The electrodes of the ion mirror have a conductive material used for creating electric fields that retard and reflect ions back toward an ion detector. The flight tube may be made of an insulating material such as fused silica or quartz.